

ABSTRACT

EFFECT OF THE COMBINATION OF CHITOSAN AND SUCROSE EDIBLE COATING ON THE QUALITY MARIGOLD FLOWER (*Tagetes patula* L.) DURING STORAGE

By

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Marigold flower (*Tagetes patula* L.) is an ornamental plant that has the potential to be developed because it has many benefits. Postharvest handling needs to be done to maintain the quality of marigold flowers during storage, one of which is by coating using chitosan and sucrose. This experiment aims to determine the quality of marigold flowers (*Tagetes patula* L.) during storage treated with chitosan, sucrose, and a combination of chitosan and sucrose with different concentrations. This experiment was carried out at the Plant Clinical Laboratory of the Food Crops and Horticulture Protection Agency PTPH Service Sub Unit Region V Tasikmalaya City West Java in March-April 2023. This experiment used a Completely Randomized Design (CRD) with 9 treatments and repeated 3 times so that there were 27 experimental plots. The concentrations of chitosan and sucrose tested were A (chitosan 0% + sucrose 0%), B (chitosan 0.5%), C (chitosan 1%), D (sucrose 1%), E (sucrose 2%), F (chitosan 0.5%+ sucrose 1%), G (chitosan 0.5%+ sucrose 2%), H (chitosan 1%+ sucrose 1%), I (chitosan 1%+ sucrose 2%). Parameters observed in this study were damage intensity, weight loss, and vase life display of marigold flowers (*Tagetes patula* L.). The experimental results showed that the combination of chitosan and sucrose concentrations was effective in maintaining damage intensity, weight loss, and vase life of marigold flowers (*Tagetes patula* L.) compared to no treatment. The combination of 0.5% chitosan + 1% sucrose is better at mainting the quality of marigold flower (*Tagetes patula* L.) during storage.

Keywords : Chitosan, concentrations, marigold, sucrose.